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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,342	12/31/2003	Jagrut Viliskumar Patel	030439	9469
23696	7590	06/17/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			BHAT, ADITYA S	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

41A

Office Action Summary	Application No.	Applicant(s)	
	10/750,342	PATEL ET AL.	
	Examiner	Art Unit	
	Aditya S. Bhat	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to because the drawings are handwritten, therefore considered informal. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Luick (USPUB 2003/022962)

With regards to claim 1, 10 and 30, Luick (USPUB 2003/022962) teaches a method, a processor and a computer readable program for determining an operating parameter of a chip having first and second ring oscillators, comprising:

measuring a frequency of the first ring oscillator; (Refer to figure 6)
measuring a frequency of the second ring oscillator; (Refer to figure 6) and
calculating an operating parameter of the chip as a function of the first and second ring oscillator frequencies. (Refer to figure 6)

With regards to claim 2, 11 and 22, Luick (USPUB 2003/022962) teaches obtaining two ring oscillator clock counts, separated by a time difference, from a ring oscillator; obtaining two independent clock counts, separated by the time difference, from a clock output independent from the ring oscillator; and calculating a ratio of the difference between the two ring oscillator clock values and the difference between the two independent clock values. (Page 4, Paragraph 0056)

With regards to claim 3, 12, 23, and 31, Luick (USPUB 2003/022962) teaches the calculated operating parameter comprises temperature. (42;Refer to figure 6)

With regards to claim 4, 13, 24 and 32, Luick (USPUB 2003/022962) teaches the calculated operating parameter comprises process speed. (42;Refer to figure 6)

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With regards to claim 5, 14 and 25 Luick (USPUB 2003/022962) teaches multiplying the measured frequency of the first ring oscillator by the measured frequency of the second ring oscillator to obtain a result; and determining, as a function of the result and characterization data of the chip, the chip's operating temperature.

(Page 4, Paragraph 0056)

With regards to claim 6, 15 and 26, Luick (USPUB 2003/022962) teaches dividing the measured frequency of the first ring oscillator frequency by the measured frequency of the second ring oscillator to obtain a result; and determining, as a function of the result and characterization data of the chip, the chip's process speed. (Page 4, Paragraph 0056)

With regards to claim 7, 16 and 27, Luick (USPUB 2003/022962) teaches multiplying the measured frequency of the first ring oscillator by the measured frequency of the second ring oscillator to obtain a second result; determining, as a function of the second result and the characterization data, the chip's operating temperature; and adjusting the determined process speed according to the determined operating temperature. (Page 4, Paragraph 0056)

With regards to claim 8, 17 and 28, Luick (USPUB 2003/022962) teaches calculating a scaled frequency value from the first and second measured ring oscillator frequencies and characterization data of the chip; comparing the calculated scaled frequency value with a known range of scaled frequency values relative to temperature; and determining, from the comparison, the temperature of the chip. (Page 4, Paragraph 0056)

With regards to claims 9, 18 and 29, Luick (USPUB 2003/022962) teaches calculating a scaled frequency value from the first and second measured ring oscillator frequencies and characterization data of the chip; comparing the calculated scaled frequency value with a known range of scaled frequency numbers relative to process speed; and determining, from the comparison, the process speed of the chip. (Page 4, Paragraph 0056)

With regards to claims 19, Luick (USPUB 2003/022962) teaches a system comprising:

a chip having first and second ring oscillators; (Page 4, Paragraph 0056) and a processor configured to:

measure a frequency of the first ring oscillator; (Refer to figure 6)

measure a frequency of the second ring oscillator; (Refer to figure 6) and

calculate an operating parameter of the chip as a function of the first and second ring oscillator frequencies. (Refer to figure 6)

With regards to claims 20, Luick (USPUB 2003/022962) teaches the chip comprises the processor. (Refer to figure 7)

With regards to claims 21, Luick (USPUB 2003/022962) teaches the processor is separate from but operably connected to the chip. (Refer to figure 7)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Uchlyama et al. (USPN 5,568,083) teaches a semiconductor integrated circuit device having an internally produced operation voltage matched to

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operation speed of the circuit, and Nider (USPN 5,385,865) teaches a method of generating active semiconductor structures by means of starting structures, which have a 2D charge carrier layer parallel to the surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S. Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat
June 10, 2005



John Barlow
Supervisory Patent Examiner
Technology Center 2800